Standardized Appointment Types Requirements and Design Document

Project: Appointment Types Standardization
Project Number: 097300

    Component UDFs: PAS 097301   (Section 4.1)
                         PAS 097302   (Section 5. SYSTEM IMPACTS)

>>> 1. PROJECT OVERVIEW

Background
The Composite Health Care System (CHCS) currently supports booking patient appointments in two modules, the Patient Appointment and Scheduling module (PAS) and the Managed Care Program (MCP) module. The PAS module existed in CHCS prior to the implementation of TRICARE. With TRICARE, the CHCS MCP module was developed to support booking patient appointments at a Medical Treatment Facility (MTF) or at network facilities. With the implementation of TRICARE, facilities have been migrating from use of the PAS appointing module to the MCP module, with the intent of eventually using only the MCP module to book patient appointments.

CHCS currently allows each MTF to create site specific appointment types, which sites have used to indicate the purpose of a patient appointment. The goal of the Appointment Type Standardization project is to provide a standard set of appointment types to be used all medical clinics and all CHCS facilities. Appointment Detail Codes will be added to indicate the purpose of a patient appointment.   Eventually, the CHCS user would have the ability to create schedules and book appointments based on a standardized appointment type, detail code, beneficiary priority, and patient age. In addition, Standardized Appointment Types would be associated with Access to Care Categories. These requirements will be implemented in a later phase.

The first phase of this effort will consolidate the appointing process in MCP and develop underlying file structure, which will be needed to support later phase(s) of the project.

1.1 Project Scope

Standardized Appointment Types (Phase I; 4604 = SMMR 3)
The first phase of the Standardized Appointment Types project will consolidate the appointing process in MCP and create underlying file structures, which will be needed in later phase(s) of the project.

In order to consolidate the booking process by booking appointments in MCP, the PAS BOK (Book Appointments) option will be removed from the PAS Clerk Scheduling menu.

In support of creating the underlying file structure needed for the project, the Standardized Appointment Types project will add standardized appointment types to CHCS. In addition, a new file will be created for Appointment Type Detail codes and their descriptions.

The first phase of the Standardized Appointment Types project will:

* remove the PAS BOK option will be removed from the Clerk Scheduling Menu
* rename Clerk Scheduling menu (change name to Clerk Front Desk Functions menu)
* add standard appointment types to CHCS
* create a new detail codes file

1.2.   Technical Assumptions

a. This enhancement will be packaged and deployed in 4.604 (SMMR 3).

b. Sites which are not fully utilizing MCP will need to perform the necessary MCP file and table build in order to book appointments in MCP.

c. In the initial phase of the Standardized Appointments project, the PAS BOK option will be removed from the PAS Clerk Scheduling menu. Changes to the other PAS Clerk options [e.g. the PAS CBP (Cancel by Patient) option and PAS NOT (Notify Patients option)] are not

planned during the initial phase of the Standardized Appointments project.

d. External resources needed for support:
. Implementation
. Product System Test
. Government Testing

1.3   Project Issues

No project issues have been identified at this time.

1.4   Project Risks

No Project Risks have been identified at this time.

1.5   External Interfaces

This project does not establish nor modify any interface to either
a piece of peripheral equipment or to an external system.

>>> 2.   PROJECT REQUIREMENTS

a.)   Proposed Changes to the Functional Description

PAS 3.2.10…..Support Managed Care Program.
       PAS 3.2.10.3.2…..Schedule Appointment.
          PAS 3.2.10.3.2.1.0…..Standard Appointment Types (new section)

1- The system shall no longer support the BOK (Book Appointment) option in the PAS Clerk
    Scheduling menu

2- The system shall provide standard appointment types

3- The system shall provide an appointment detail code file

 b.)   Proposed Changes to the Requirements Matrix

   Add (3) New Requirements

PAS 3.2.10…..Support Managed Care Program.
       PAS 3.2.10.3.2…..Schedule Appointment.
          PAS 3.2.10.3.2.1.0….. Standard Appointment Types

PAS 3.2.10.3.2.1.1…..no longer support the BOK (Book Appointment) option in the PAS Clerk
                     Scheduling menu
PAS 3.2.10.3.2.1.2…..provide standard appointment types
PAS 3.2.10.3.2.1.3…..provide Appointment detail code table

>>> 4. PROJECT DESIGN

A. Functional Overview

The first phase of the Standardized Appointment Types project will support consolidating and
centralizing the appointing process in MCP and creating the underlying file structure needed
for the Standardized Appointment Types project.   The PAS BOK (Book Appointments) option will
no longer be supported in the PAS Clerk Scheduling menu.   The PAS BOK option will be removed
from the PAS Clerk Scheduling menu option and will be renamed the Clerk Front Desk Functions
menu. CHCS will create new standardized appointment types.   In addition, a new file will be
created for Appointment Type Detail codes and their descriptions.

B. Functional Dependencies

1. Sites will need to perform MCP file & table build necessary in order to fully utilize

MCP.

C.   Business Rules

1.   Sites will continue to use existing business rules and practices to book
      appointments in MCP.

D.   Users

PAS/MCP users will use MCP functionality.

E.   Inputs

Description of Input	File Name	File #
(C) Detail Codes	Appointment Detail Codes	TBD
(C) Appointment Types	Appointment Type	44.5

F.   Process Narrative

Instead of using the PAS BOK option to book patient appointments, the user will use existing
MCP functionality to book appointments using the MCP (e.g. Health Care Finder) software.

G.   Outputs

Description of Output	File Name	File #
Appointment Types	Appointment Type	44.5

H. Detailed Workflow

Remove PAS BOK option
In support of TRICARE, the Appointment Process Standardization project will centralize the appointment booking process and support booking appointments using the Managed Care software. The PAS BOK option will be removed from the Clerk Scheduling Menu.
T
he system will move PAS Clerk scheduling options other than BOK (e.g. USV, CBP, DPA, IPC, MCD, EOD, VAP, SDP, NOT, WLR, RDM, ORM, TRM) to another (new) menu, the Clerk Front Desk Functions menu.

(1)   Menu Path: CA>PAS>MAN

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============================= Screen # 1 =======================================
    HMCP    Health Care Finder Menu
    CDSK    Clerk Front Desk Functions Menu         <----- New Menu option
    EMCP    Enrollment Processing Menu
    DMCP    Display Patient Appointments
    CMCP    Cancellation by Patient
    OMCP    Outputs & Management Reports Menu
    RMCP    Registration Menu
    BMCP    Batch PCM Reassignment Menu
    IMCP    Interactive NAS Processing Menu
    PMCP    Provider Network Management Menu
    FMCP    File/Table for MCP Menu
    AMCP    Ad Hoc Report Menu

Select Managed Care Program Menu Option:

============================= End of Screen # 1 =======================================
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It should be noted that for standalone CHCS sites, the Clerk Front Desk Functions menu will be placed on the Managed Care Program menu. For CRSP sites (both regional and local), the Clerk Front Desk Functions menu will be placed on the main PAS menu. At CRSP sites, the specific menu option on the Clerk Front Desk Functions menu on local and regional databases will vary in accordance with existing CRSP business rules.

After the user selects the Clerk Front Desk Functions menu, the system will display the Clerk Front Desk Functions menu options:

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============================= Screen # 2 =======================================
    USV     Unscheduled Visit (Walk-In, Tel-Con, S-Call)
    CBP     Cancellation by Patient
    DPA     Display Patient Appointments
    IPC     Individual Patient Check-In
    MCD     Multiple Check-In by Default
    EOD     End-of-Day Processing/Editing
    VAP     Ambulatory Procedure Visits Menu
    NOT     Notify Patients Menu (Cancel, No-Show, Wait List)
    WLR     Wait List Requests
    RDM     Registration & DEERS Menu
    ORM     Operational Reports Menu
    TRM     Track & Request Medical Records Menu

Select Clerk Front Desk Functions Menu Option:

============================= End of Screen # 2 =======================================
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It should be noted that the PAS BOK option will be removed from the Clerk Scheduling menu and will not be present on the Clerk Front Desk Functions menu. However, options other than the BOK option will be moved to the Clerk Front Desk Functions option and the user will be able to use existing functionality in these options.

Appointment Type Standardization

CHCS will change the Appointment Type file to a class 2B file and will add standardized appointment types to existing CHCS Appointment Type file. The (18) standardized appointment types are currently defined as follows:

1. PCM (Initial Primary Care Appointment)
2. PCM$ (Initial Primary Care Appointment; MTF book only)
3. SPEC (Initial Specialty Care Appointment)
4. SPEC$ (Initial Specialty Care Appointment; MTF book only)
5. ACUT (Acute Appointment)
6. ACUT$ (Acute Appointment; MTF book only)
7. ROUT (Routine Appointment)
8. ROUT$ (Routine Appointment; MTF book only)
9. WELL (Wellness or Health Promotion Appointment)
10. WELL$ (Wellness or Health Promotion Appointment; MTF book only)
11. PROC (Procedure Appointment with designated time allotment)
12. PROC$(Procedure Appointment with designated time allotment; MTF only)
13. EST (Established Patient Follow-up with designated time allotment)
14. EST$ (Established Patient Follow-up with designated time allotment; MTF book only)
15. TCON (Telephone Consult)
16. TCON$ (Telephone Consult; MTF book only)
17. GRP (Group)
18. GRP$ (Group; MTF only)

Appointment Detail Codes File
CHCS will create a new class 2B file for appointment detail codes.
The standard appointment detail codes are currently defined as follows:

+PPD	Positive Purified Protein Derivative (PPD) or other tuberculosis test evals
>BF	Weight exceeding body fat standard
ADHD	Attention Deficit and Hyperactivity Disorder or Attention Deficit Disorder
Anger	Anger management education – no PCM referral required
Asthma	Asthma evaluation or education appointments
BCP	Birth Control
BEPC	Birth and Early Parenting Class
BFC	Breast Feeding Class
BK	Back pain or problem
BTL	Bilateral Tubal Ligation
Chol	Cholesterol
Circ	Circumcision
Colpo	Colposcopy – abnormal pap required
DM	Diabetes
DSGCH	Dressing/bandage change
E&I	Female Endocrine and Infertility patients only
EFMP	Exceptional Family Member Program
EyeDz	Eye disease
FlexS	Flexible Sigmoidoscopy
Flt	Flight Physical Exam
GDb	Gestational Diabetes patients only
Head	Headache education
HTN	Hypertension patients
IUD	Removal or possible placement of IUD
MC	Medicare eligible
MEB	Evaluation Board Physical Exam
NoPaP	Gynecology appointments only, not Paps
NOR	Removal or possible replacement of Norplant
NPCL	New Prenatal Class
NST	Non-Stress Test
Nutr	Nutrition education – no PCM referral required
OB	Pregnancy or obstetrics
OSS	Overseas screening
PAP	Pap Smear patients
PDS	Pathfinding/Drill Sergeant test
PE	Physical Exam
PFT	Pulmonary Function Tests/Spirometry
PP	Post-Partum patient only
PRT	Physical Readiness Test Screens
PVR	Post-Void Residual

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RET                 Retinal Screening
Sch                 School physical
Scoli               Scoliosis
SEA                 Sea Duty Screening
Inject              Shot only
SPE                 Separation or retirement physical exam
Stress              Stress management education program – no PCM referral required
TobCes              Tobacco Cessation – no PCM referral required
UroGyn              Urology or Gynecology
Vas                 Vasectomy
Vert                Vertigo
WB                  Well-Baby
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It should be noted that sites will have the capability to add additional (site specific) detail codes to the Appointment Detail Codes file.
It should be noted that the Appointment Detail Codes file will only be accessible using Fileman during the initial (SMMR 3) phase of this project.

>>> 5. SYSTEM IMPACTS   PAS 095452

A. Disk Space Utilization

This enhancement will create a new file called Appointment Detail Codes located in the ^SDX global and add new standard appointment type entries to the existing appointment types file (#44.5) also located in the ^SDX global. The global size is between 25-300 DSM blocks and the weekly growth pattern no more than 1-2 DSM blocks/6 weeks. It is anticipated for Phase 1 of this project that the growth will continue to be negligible. However, it should be considered that when the sites implement the new functionality in the subsequent phases of this project, this global could experience an increase in size as the sites customize these files. This global resides on the MST volume set and should be monitored.

In addition, this project will, in essence, force the site to completely use Managed Care functionality. Full implementation of managed care will require considerable file and table build.   While most sites have started this effort there are a few who have not.   There are many globals that are related to managed care activity.   The table below reflects the primary globals, and data derived from 2 sites to show the range of size by DSM blocks per file entry. It also depicts the percent of MCP Patient population per actual Patient file population.

Wright Patterson - 5-3-00		File Entries	DSM Blocks(data&ptr)	DSM blks/entry	Vol Set/2 4vol	% of MCP Pt to Pt
MCP Referral	^CPA	286,945	168,620	0.59	MST	
MCP Patient	^CPP	73,277	56,884	0.78	AAA	22%
MCP Provider	^CPR	7,983	708	0.09	MST	
MCP Enrollment Candidates	^CPBAE	30,311	7,550	0.25	MST	
Patient File	^DPT	328,647				
Maxwell - 5-3-00						
MCP Referral	^CPA	200,251	95,102	0.47	MST	
MCP Patient	^CPP	37,402	20,611	0.55	AAA	32%
MCP Provider	^CPR	226	18	0.08	MST	
MCP Enrollment Candidates	^CPBAE	26,121	5,307	0.20	MST	
Patient File	^DPT	118,469				

Most of these globals reside on the volume MST.   It is recommended the sites verify there is enough disk space for the growth of these globals before starting their file and table builds.

B. Archive and Purge

There are not any archive or purge options for this project.

C. Performance Considerations

This project not only standardizes appointment types, it changes some menu structure and eliminates the PAS Book Appointments option (BOK). Currently the majority of sites split option usage between Health Care Finder Booking (HCF) and PAS Book Appointments (BOK). Some sites use the BOK option exclusively as they haven't started booking appointments with managed care functionality. This project will force the site to use the HCF option for all appointment scheduling.

With the installation of the PADC product (Change Packages #39-43), we observed a relative increase in CPU Utilization for the HCF option at Wright Patterson of 37% and at Tidewater of 29% during the 9-11 time frame. During the 9am to 11am time frame at Wright Patterson, the HCF option is 19% of the total PAS options and Book Appointment is 5%. After PADC, the per transaction mean CPU Utilization is 1.46 seconds/transaction for HCF compared to .31 CPU seconds/transaction for the Book Appointment option.

As the sites move to exclusively use the HCF option, and, as seen at Wright Patterson, about 140 more transactions will be added to the HCF option. At the post PADC value of 1.15 CPU seconds per transaction (allowing for the elimination of CPU seconds for BOK) we're estimating an absolute CPU utilization increase of 2% for the HCF option.

Assuming that Wright Patterson is 'typical' for sites that are currently combining the usage of these options, this increase would not be seen as significant for the site's overall CPU utilization for Phase I of this project. However, there are sites that exclusively use the BOK option that will now be exclusively using the HCF option. For example, a site that has 500 transactions during a 2-hour window will increase approximately 8% in absolute CPU utilization. This could affect the site's overall CPU utilization.

D. Local Symbol Table

Local symbol table size is not anticipated to increase.

E. Network Impact

None

F. Security Considerations

None

G. User Perceived Impact

There will be a significant impact for the users. The PAS Menu will change as well as the Managed Care Menu. Options are removed and/or relocated and a new menu is created. The users will no longer be able to book appointments using the PAS Book Appointment option and will have to use the Health Care Finder Booking option to schedule all appointments. Because of this menu change, sites that are not currently using managed care will need to start. Files and tables must be built in readiness for moving to the managed care process. Users will need to be sufficiently trained in order for this to be a smooth transition.

H. Conversions

A conversion is planned to remove the PAS Book Appointments option from the system.

I. Site Parameters

None

J. Dependencies

The Managed Care process and functionality must be fully implemented at the site for this project.

K. Integration Issues

None

L. Implementation Considerations

a.   Sites currently not using MCP functionality must perform MCP file and table builds and transition to the managed care process prior to the installation of this enhancement.
b.   The users should be sufficiently trained for the transition to the HCF option.

c. The site manager should verify there is enough disk space to allow for global growth.
d. Sites that are not currently using the managed care process should verify there is enough 'head room' to allow for an increase in CPU utilization.
e. This project will be deployed with the SMMR3 product (v4.604) and will require downtime to install.